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Computer Science 260: Quiz 2

X The transitive closure of the child relation is the ^{descendant} Sibling relation. ✓

X Let $f(x) = 2x$ and let $g(x) = x^2$. Hence, $f \circ g(x) =$ $2x^2$ (Insert ✓
mathematical expression).

X A relation that is reflexive, symmetric and transitive is called an
Equivalence relation. ✓

X Consider the following program fragment

$\{X = a + b - a\}$ $s := a;$ $\{X = a + b - s\}$ ✓

$\{x + s = a + b\}$ $x := x + s$ $\{x = a + b\}$ ✓

Use the assignment rule and the concatenation rule to fill in the boxes. Do not use any
other rules. Simplify the final result to get $\{X = b\}$. ✓

X If $\{P\}C\{Q\}$ is proven, then $\{P_1\}C\{Q\}$ is also proven provided P_1 is
Weaker than P . ✓

Stronger

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xRx

$xRy \leftrightarrow yRx$

$xRy \wedge yRz \rightarrow xRz$